

Abstract

A metal plating bath and method of plating a metal on a substrate where the metal plating bath contains heteroatom organic compounds that prevent or inhibit the consumption of metal plating bath additives. The metal plating bath additives improve the brightness of plated metal as well as the ductility, micro-throwing power and macro-throwing power of the plating bath. The addition of the additive consumption inhibiting heteroatom organic compounds improves the physical properties of the plated metal as well as the efficiency of the plating process. The heteroatom organic compounds may contain sulfur, oxygen or nitrogen heteroatoms.